The following claims are presented for examination:

1. (Original) A method for manufacturing a battery having plates and an AGM separator, comprising:

mixing (i) silica and (ii) an electrolyte containing sulfuric acid to form a first silica-electrolyte mixture, wherein silica as SiO_2 is in a range of about 1.0 percent to about 8.0 percent by weight of said first silica-electrolyte mixture, and further wherein a particle size of said silica is less than 100 nanometers;

contacting said first silica-electrolyte mixture with said plates and said AGM separator; and

forming said plates by applying current thereto, wherein during and after said plates are formed, said first silica-electrolyte mixture gels to form a first gelled electrolyte.

2. (Original) The method of claim 1 wherein silica as SiO_2 is in a range of about 2.5 percent to about 3.5 percent by weight of said first silica-electrolyte mixture.

3. (Original) The method of claim 1 wherein a concentration of said sulfuric acid is selected so that a specific gravity of said first gelled electrolyte is at a desired value, after plate formation, as a function of a voltage of said battery.

4. (Currently Amended) The method of claim 1 further comprising:

mixing (i) silica and (ii) an electrolyte containing sulfuric acid to form a second silica-electrolyte mixture, wherein silica as SiO_2 is in a range of about 10 percent to about 19 percent by weight of said second silica-electrolyte mixture, and wherein said second silica-electrolyte mixture ~~rapidly~~ gels to form a second gelled electrolyte; and further wherein a concentration of said sulfuric acid is selected so that a specific gravity of said second gelled electrolyte is at said desired value; and

adding said second silica-electrolyte mixture to said battery after said plates are formed and in an amount sufficient to substantially fill any void volume remaining in said battery.

5. (Original) The method of claim 4 wherein a ratio of a volume of said first gelled electrolyte to a volume of said second gelled electrolyte is in a range of about 24:1 to 32:1.

6. (Currently Amended) A method for manufacturing a battery, comprising:

contacting **and penetrating** an ~~AGM~~ **absorbent glass mat** separator and plates of said battery with a first silica-electrolyte mixture, wherein said first silica-electrolyte mixture comprises (i) colloidal silica and (ii) an electrolyte containing sulfuric acid, and wherein silica as SiO_2 is in a range of 1.0 percent to 8.0 percent by weight of said first silica-electrolyte mixture;

gelling said first silica-electrolyte mixture by forming said plates **~~by passing current therethrough; and~~**

~~adding a second silica-electrolyte mixture to said battery after forming said plates, wherein said second silica-electrolyte mixture comprises (i) colloidal silica and (ii) an electrolyte containing sulfuric acid, and wherein silica as SiO_2 is in a range of about 10 percent to about 19 percent by weight of said second silica-electrolyte mixture~~.

7. (Currently Amended) The method of claim 6 **~~wherein said first silica-electrolyte mixture gels to form a first gelled electrolyte during said forming of said plates, and~~** wherein a specific gravity of said first gelled electrolyte is in a range of about 1.28 to 1.31, as a function of a desired voltage of said battery.

8. (Currently Amended) The method of claim 6 **further comprising adding a second silica-electrolyte mixture to said battery after forming said plates, wherein said second silica-electrolyte mixture comprises (i) colloidal silica and (ii) an electrolyte containing sulfuric acid, and wherein silica as SiO_2 is in a range of about 10 percent to about 19 percent by weight of said second silica-electrolyte mixture, and** wherein a specific gravity of said second silica-electrolyte mixture is in a range of about 1.28 to 1.31.

9. (Original) The method of claim 6 wherein a ratio of a volume of said first silica-electrolyte mixture to a volume of said second silica-electrolyte mixture is in a range of about 24:1 to 32:1.

10. (Currently Amended) The method of claim 6 **further comprising adding the first silica-electrolyte mixture to the battery** ~~**wherein the first silica-electrolyte mixture is added forming said plates further comprises conducting plate formation**~~ at sub-atmospheric pressure.

11. (Original) The method of claim 1 wherein a particle size of said silica is in a range of about 10 to 20 nanometers.

12. (Currently Amended) The method of claim **[[**1**]]** **6** wherein said silica as SiO_2 is in a range of about 2.5 percent to about 3.5 percent by weight of said first silica-electrolyte mixture.

13. – 20. (Canceled)

21. (New) A method for manufacturing a battery, comprising:

contacting and penetrating an absorbent glass mat separator and unformed plates of a battery with a silica-electrolyte mixture, wherein the silica-electrolyte mixture has the following characteristics:

(a) a particle size of the silica in the silica-electrolyte mixture is suitably small so that the silica is not filtered by the separator or the plates;
(b) the silica-electrolyte mixture will not gel before formation of the plates;
(c) the silica-electrolyte mixture gels due to an increase in its specific gravity from sulfate that is released during formation of the plates; and

forming the plates by applying current thereto.

22. (New) The method of claim 21 wherein silica as SiO_2 is in a range of about 1.0 percent to about 8.0 percent by weight of the silica-electrolyte mixture.

23. (New) The method of claim 21 wherein the particle size of said silica is less than 100 nanometers.

24. (New) The method of claim 21 wherein the silica is colloidal silica.

25. (New) A method for manufacturing a battery, wherein the method comprises gelling an electrolyte within an absorbent separator and plates of the battery by contacting the separator and plates with a silica-electrolyte mixture and then forming the plates, wherein:

(a) silica in the silica-electrolyte mixture has a particle size that is suitable for penetrating the separator and unformed plates such that a concentration of silica in a portion of the silica-electrolyte mixture that penetrates the separator and the un-formed plates is equal to a concentration of silica in a portion of the silica-electrolyte mixture that remains outside of the separator and the unformed plates; and

(b) characteristics of the silica-electrolyte mixture substantially prevent the silica-electrolyte mixture from gelling until the plates have substantially formed.

26. (New) The method of claim 25 wherein the concentration of the silica as SiO_2 in the silica-electrolyte mixture is in a range of about 1.0 percent to about 8.0 percent by weight of the silica-electrolyte mixture.

27. (New) The method of claim 25 wherein the particle size of silica is less than about 100 nanometers.

28. (New) The method of claim 25 wherein the characteristics of the silica-electrolyte mixture comprise silica concentration and specific gravity of the silica-electrolyte mixture.